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ON CHOICE.

By CAROLINE MILES HILL.

The person who has not, at some time or another, realized that choice is a problem, is certainly an exception. Most of us must confess that upon some occasion we have retired to our closets and there tossed up a penny to get rid of a troublesome decision. It is a matter of common observation also, that for two classes of persons choice is very difficult and sometimes impossible for those absolutely ignorant of the relations and consequences of either of two courses of action, and for those who know the arguments to both sides of the question and have no prejudices to consult. A child is often more annoyed and disturbed by being urged to decide something for itself than by any amount of compulsion. It is nothing unusual to hear an ignorant and vacillating individual say he does not care which of two alternatives he accepts, nor is it unusual to hear the wise and resolute person say that in view of all the facts to both sides, it is next to impossible to say which group should be chosen. If only "*once to every man and nation*," came the "moment to decide," choice might not be a psychological problem worthy of investigation, but when it comes daily in some form, often so predetermined that it does not rise into consciousness as choice, again so much influenced by its fringe of relations to other things that it is called a dilemma, it is clearly a mental act subject to natural laws, which may be assumed to be the same for all kinds of choices. Choice comes to the American nation at least once in four years, and every newspaper in the land considers itself capable of setting forth the natural laws which have determined the nation's choice. Self-interest on the one hand as over against the good of the whole nation, or habit or conservatism, or discontent or what not. The individual thinks he understands the reasons for his own decision on any difficult case, but the motives seen by his "*candid friends*" are often very different from the ones which he assigns to himself.

The ready answer of the cynic to the question, what causes the difficulty in choosing? would undoubtedly be, choice is difficult where the line of self-interest is not clear. The answer of the psychologist is stated in almost the same words. James (Smaller Psychol., p. 170) says that choice follows attention, and attention interest. Dewey, giving the interpretative side, says that we choose that in which we are best able to find ourselves, our experience determining with what we can identify ourselves. The whole difference in the two types of answers is in the content of the term self-interest.

Viewed historically, the question of choice is, what, in Greek times, determined whether a man should be a Stoic or an Epicurean? At the time of the Reformation, what made a man a Lutheran, a Calvinist, or a Zwinglian? Later, what tipped the balance in favor of the Tories or the Whigs, the Puritans or the Dissenters? And so on through all the strifes and factions that have divided mankind. Because the tenets of the one side or the other seemed more rational? Rationality, so-called, involves habit, suggestions from friends, influence of surroundings, as well as so-called argument. In fact there are no absolute and abstract arguments, all are personal and concrete. Separating out

the elements so far as they are known, there remains always at bottom one insoluble factor; temperament determines very largely which belief shall seem more rational to any individual, and temperament is, at bottom, a physiological problem.

Any study of choice, then, must be a study of different elements and of their importance and relations to each other, but before this can be attempted there is need of a physiological base line from which to reckon. If we could find some choices absolutely free from thought associations or from calculation of consequences, the unconscious or physical elements might be discovered. There are some suggestive cases where physical force seems to hold us back from a decision which reason recommends. Often we find that obedience to this instinct was very wise.

The practical and ethical bearings of the general problem give it so great an attractiveness that an attempt was made to treat some aspects of it experimentally. The results, though meagre, have a certain interest in themselves; and as their further development by the writer has become impossible, she ventures to give them as they are, hoping that they may prove, if not an assistance, at least a warning to any who may be tempted in the same direction.

In view of the complexity of the problem of choice and of the necessity of eliminating as many of the conscious factors as possible, a few trial experiments were made. In order to find an approximate answer to the question, what conscious motives will influence a choice between two things differing very slightly?

1. A series of sets of two nonsense syllables of three letters each, in which two letters were different (*e. g.*, rab and vab, hib and gib), was shown to a class of twenty-four young women, who were asked to write down one syllable of each set. When the series was finished they were asked to write any conditions which might have influenced their choices. Result: 12 said they chose the syllable which seemed nearer, 5 chose the left because it was natural to begin to read with the left hand, 2 formed an association at once with one of the syllables, and thus the choice seemed to make itself, 3 said they thought they had made up their minds before they opened their eyes, 2 could not give any reason.

2. Two different letters were shown in the same way. Result: nearness was assigned as a reason in 6 cases, habit of reading in 5. Three new reasons were mentioned,—7 made choice of one letter simply because they had chosen the other before, 5 wrote the one which caught the eye first, 2 chose one because they preferred its form to that of the other, while 9 could give no reason.

3. Next, two circles having the same radius were shown. Result: 9 chose the one which seemed nearer, 7 the left from the habit of reading, 1 no reason.

While the method used in these preliminary experiments was very crude, and the results could not be relied upon as of any scientific value, they seemed to indicate something worth thinking about in forming an hypothesis, *i. e.* The three trials had been made with objects successively simpler, an association was formed only with syllables, and an aesthetic preference was noted only with letters. With letters the motives were less conscious, since 9 were unable to say why they chose one rather than the other; with circles the motives were practically two: "nearness" and habit. Hence, it would seem desirable to plan an experiment in which choice from aesthetic preference should be impossible, and one in which no associations were involved, while the line of investigation indicated seemed to be to measure the force of habit, and to find the meaning of the "feeling of nearness."

The second attempt to find the elements and their proportion is the private history of a campaign that failed, but may be worth mentioning briefly.

Method: A black semi-circular screen was now made, placed on a table covered with black. A black cloth was thrown over the top and a window cut in the middle of the screen. The subject sat in front of this window, with pencil and paper lying on the table. Pairs of gummed letters and figures which had been stuck on white card board were slipped into this window from behind the screen while the subject's eyes were closed. At a given signal he opened his eyes, looked at the window during four beats of the metronome (or four ticks of the watch), and closed them for an instant at another signal, opening them to write one or the other of the letters on the paper. The purpose of this procedure was (1) to find what is the normal proportion of right hand to left hand choices, and (2) what the conscious motives for choosing the right hand or left hand objects are, (3) whether unconsciously the proportion of right to left choices could be influenced by attracting the attention to one side or the other.

Each series of pairs of letters and figures was shown three times, once with something to attract the subject's attention to the right or to the left, *e. g.*, a scrap of red or blue paper, or a person standing on one side or the other, but within the subject's field of vision,—and once without any such stimulus.

Result: (1) without stimulus. The proportion of left hand to right hand choices (118 trials) was, in round numbers, 4 to 7; (2) with the attention attracted to the left hand side by some means, the proportion became 4 to 6 (93 trials); (3) with the stimulus on the right, and another set of subjects, the unexpected ratio of 7 to 4 in favor of the left was found. Upon inquiry it was found that one of the subjects always chose left, and another was never led by anything except associations.

This set of trials was made in the Harvard Laboratory in the winter of '94-5. They seem to indicate a slight influence of attention upon choice when the persons had no fixed habits or permanent associations. A year later, the same experiment was repeated at the laboratory of the University of Chicago, with the assistance of Miss Helen Thompson. The results obtained here were only negative and the experiments seemed to arouse in the subjects the same feeling of annoyance which the child feels when he is told that he may do just as he pleases, but *must* do one of two things, neither of which has any meaning to him. Geometrical forms and kindergarten sewing cards were used, as well as the letters and numbers, but the number of right and left choices was almost exactly the same, and the use of a stimulus seemed to make no difference at all. There are three probable reasons why this method brought no results:

1. The adult cannot choose absolutely unconsciously.
2. So far as he is conscious he is not likely to know certainly what influenced him.
3. The results favorable to the hypothesis that attention is the decisive factor in choice may be due to accident.

Another simple experiment was decided to contain more nearly the elements of natural choice, *i. e.*, a decision which resulted in action involving consequences. Two playing cards were turned faces down, on a bare table at which the subject was seated. He was told to close his eyes while the cards were being placed, open them at a signal and turn one of the cards over. An attempt was made to render the subjects unconscious by telling one class, those in the laboratory, that this was a way of telling fortunes with cards, the observer

making up a story from them as they were turned. Two other classes of subjects were used, (1) adult persons outside the laboratory who were entirely innocent of psychology, and (2) children from the kindergarten. The former class were told that it was a psychological experiment, which, I am sure, conveyed very little information to them, and the children that it was a game which I wished them to come to my house and play with me, I being very fond of children and games.

Result: (1) adults in laboratory, 172 trials; 79 left choices, 93 right, or about a proportion of 5 to 6. (2) adults ignorant of psychology, 178 trials; 87 left, 91 right, or about 12 to 13. (3) children between four and six years. (a) kindergarten sewing cards, 49 trials; 17 left, 31 right, or about 1 to 2; (b) playing cards, 223 choices from 15 children; 54 left, 160 right, or 1 to 3. None of the children were younger than four years, 5 were about six years. The choices of the elder five were: total, 87; left 28, right 59, or about 1 to 2. The choices of the ten about 4 or 5 years were: total, 136; left 26, right 101, or 1 to 4. The children about 6 tend to hesitate and deliberate more than the younger ones, with one exception. One little girl of 4 years always deliberated, and of her 11 choices, 4 were left and 7 right, or the same proportion as the older children.

From these results one is certainly safe in concluding that natural, physical choice, seizes upon the object nearer to the reader's hand. This is seen in both right and left-handed children. The desire for variety is probably indicated by the one-fifth of the younger children's choices of the left hand card.

With these conclusions for a basis, another simple experiment was planned to find the influence of attention upon the normal ratio of right to left hand choices.

1. Cards of two sizes were taken, ladies' and gentlemen's visiting cards, and placed side by side.

Result: (a) larger card to right; 123 trials; left 40, right 83, or 2:1,—the same as the normal ratio. This was tried with 13 children. If we throw out the choices of one boy who said he liked the smaller card better, and of one girl who seemed to have fallen into the habit of choosing the left card, and kept on choosing it automatically, the result stands: total, 114; left 35, right 79, or a slight increase in the proportion of right-hand choices.

(b) Larger card to the left.

Result: left 30, right 69; total, 99.

2. Cards of the same size with a red or blue spot on the right one.

Result: total, 37; left 7, right, 30, or 1:4, double the normal ratio.

3. Cards of the same size with a red or a blue spot on the left-hand card.

Result: total, 130; left 55, right 75, about 1:1½, or a decrease of the normal ratio, but not so much as the additional stimulus on the right is able to increase the normal ratio.

Three children apparently thought only of seeing the other side of the card as soon as possible, seized the card nearer the right hand and were not influenced by the spot.

Not counting their records, the result would stand: total, 161; left 57, right 104, nearly 2:1, or a reversal of the normal ratio.

4. 51 trials were made with cards exactly alike, arranged so: b a

Result: left 30, right 21.

This, so far as it goes, corroborates the conclusion that it is natural to choose the object nearer, when the choice is uninfluenced by any other consideration.

The general results are so simple as hardly to need summarizing, the most important, perhaps, being the extreme complication of the phenomena to be examined.